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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,796	11/19/2003	Wang Joo Lee	5895P048	8589

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EXAMINER

PAYNE, DAVID C

ART UNIT PAPER NUMBER

2613

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,796

Applicant(s)

LEE ET AL.

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 13 is/are rejected.
- 7) ☒ Claim(s) 2-12 and 14-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee US 2004/0067063 A1 (Lee).

Re claims 1 and 13, Lee disclosed,

FIG. 5A is a block diagram of an apparatus for recovering a clock by extracting spectral lines using filters with fixed reflective wavelengths. A circulator 510 prevents the optical signals reflected by filters 520 and 530 from being mixed with the incoming signal. The circulator 510, which is a 3-port device, further includes a port that outputs reflected waves received from the port 2. In other words, the

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circulator 510 has 3 ports in total, an input port, an output port, and a port for outputting a reflected signal received via the output port.

A signal received via a first port of the circulator 510 is output via a second port. A signal received via the second port is output via a third port. A signal received via the third port is output via the first port.

The first filter 520 extracts a spectral line corresponding to either the first or second side peak 220 or 230 and reflects it back to the circulator.

Similarly, the second filter 530 reflects back a spectral line corresponding to the peak 210 to the same port as it came out. Note that, in the invented system, the signal having the wavelength corresponding to the largest peak experiences attenuation by passing the attenuator 540 while propagating towards the second filter 530 and reflecting back to the circulator 410 by the second filter 530. Thus, by adjusting the attenuator, its magnitude can be made equal to the magnitude of either the first or second side peak 220 or 230 extracted.

An attenuator 540 equalizes the power levels of extracted spectral lines.

A PD 550 receives the two spectral lines whose magnitudes were made equal through the attenuator and provokes beating between the received signals, thereby generating a clock component.

As described above, when a tunable filter is used, a range of attenuation in which the magnitude of a spectral line at the peak 210 is made equal to the magnitude of a spectral line at either the first or second side peak 220 or 230 is determined by the spectrum characteristic of the tunable filter.

However, in the clock recovery apparatus of the present invention, the magnitudes of two spectral lines can be made equal using the attenuator 540, no matter what magnitude difference exists between the spectral line at the peak 210 and that at either the first or second side peak 220 or 230.

By using a filter with a narrow bandwidth to implement each of the first and second filters, 520 and 530, noise components existing between two spectral lines can be further reduced, and consequently

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the noise level that may be generated during the beating process in the PD 550 can be lowered, (e.g. paragraphs 34-40.)

***Allowable Subject Matter***

4. Claims 2-12 and 14-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

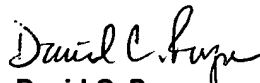
***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7:00a - 4:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dcp

  
David C. Payne  
Primary Examiner  
AU 2613